

AMENDMENTS TO THE CLAIMS:

Please amend the claims, as indicated below. This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A signal processing method comprising:
 - receiving a first wireless communication signal, the first signal including pulse shaping distortion, ~~wherein the pulse shaping distortion is produced by pulse shaping;~~
 - ~~obtaining an approximation of the pulse shaping distortion;~~
 - extracting ~~[[the]]~~ an approximation of the pulse shaping distortion from the first signal to obtain a second signal; and
 - processing the second signal to obtain a user signal;
 - wherein extracting comprises applying an equalization between the second signal and a third signal corresponding to the first signal,
 - the third signal including no pulse shaping distortion and consisting only of binary code division multiple access (CDMA) codes.
2. (Original) The method of claim 1, further comprising:
 - conducting a single-user detection; and
 - obtaining an amplitude estimate and a symbol delay for a user in a frame.
3. (Original) The method of claim 1, wherein the second signal has insignificant or no pulse shaping effects.

4. (Canceled)
5. (Currently Amended) The method of claim 1, wherein extracting ~~the~~
~~approximation of the pulse shaping distortion from the first signal~~ comprises
applying a decision feedback equalization between the second signal and an
approximation of ~~an original~~ the third signal ~~before pulse shaping~~ based on a
current decision.
6. (Currently Amended) The method of claim 1, wherein extracting ~~the~~
~~approximation of the pulse shaping distortion from the first signal~~ comprises
applying at least one order of perturbation to adjust the approximation of the
pulse shaping distortion.
7. (Currently Amended) The method of claim 1, wherein extracting ~~the~~
~~approximation of the pulse shaping distortion from the first signal~~ comprises:
applying at least one equalization; and
repetitively applying at least one order of perturbation to adjust the
approximation of the pulse shaping distortion.

8. (Currently Amended) The method of claim 1, wherein extracting ~~the~~
~~approximation of the pulse shaping distortion from the first signal~~ comprises
subtracting an approximately known function of pulse shaping from an unknown
function of a time-varying channel function.
9. (Currently Amended) A signal processing method comprising:
receiving a first wireless communication signal, the first signal including
non-channel distortion, ~~wherein the non-channel distortion is~~
produced by a non-channel function;
~~obtaining an approximation of the non-channel distortion;~~
extracting ~~[[the]]~~ an approximation of the non-channel distortion from the
first signal to obtain a second signal that includes a time-varying
channel function; and
processing the second signal to obtain a user signal;
wherein extracting comprises applying an equalization between the
second signal and a third signal corresponding to the first signal,
the third signal including no non-channel distortion and consisting
only of binary code division multiple access (CDMA) codes.
10. (Previously Presented) The method of claim 9, wherein the non-channel function
comprises a transformation function.
11. (Previously Presented) The method of claim 9, further comprising:

conducting a single user detection; and
obtaining an amplitude estimate and a symbol delay for a user in a frame
to obtain the approximation of the non-channel distortion.

12. (Previously Presented) The method of claim 9, wherein the second signal has insignificant or no non-channel distortion.

13. (Canceled)

14. (Currently Amended) The method of claim 9, wherein extracting ~~the~~
~~approximation of the non-channel distortion from the first signal~~ comprises
applying a decision feedback equalization between the second signal and an
approximation of an original the third signal ~~before non-channel transformation~~
based on a current decision.

15. (Currently Amended) The method of claim 9, wherein extracting ~~the~~
~~approximation of the non-channel distortion from the first signal~~ comprises
applying at least one order of perturbation to adjust the approximation of the
non-channel distortion.

16. (Currently Amended) The method of claim 9, wherein extracting the ~~approximation of the non-channel distortion from the first signal~~ comprises subtracting an approximately known non-channel distortion from an unknown distortion of a time-varying channel function.
17. (Currently Amended) The method of claim 9, wherein extracting the ~~approximation of the non-channel distortion from the first signal~~ comprises:
 - applying at least one equalization; and
 - repetitively applying at least one order of perturbation to adjust the approximation of the non-channel function.
18. (Currently Amended) A signal processing system, comprising:
 - a receiver for receiving a first signal for wireless communication;
 - a tracking device for obtaining an amplitude estimate and a symbol delay for a user;
 - an approximating device, coupled to the tracking device, for providing an approximation of non-channel distortion in the first signal, wherein the non-channel distortion is produced by a non-channel function; and
 - a signal-extracting device, coupled to the approximating device, for extracting the approximation of the non-channel distortion from the first signal to obtain a second signal that includes a time-varying channel function;

wherein extracting comprises applying an equalization between the
second signal and a third signal corresponding to the first signal,
the third signal including no non-channel distortion and consisting
only of binary code division multiple access (CDMA) codes.

19. (Previously Presented) The system of claim 18, wherein the non-channel function comprises a transformation function.
20. (Currently Amended) The system of claim 18, wherein extracting the ~~approximation of the non-channel distortion from the first signal~~ comprises at least one of the following process:
 - applying at least one equalization; and
 - applying at least one order of perturbation to adjust the approximation of the non-channel distortion.
21. (Cancelled)